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Karpinsky et al.

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(54) **FOOD COATING AND TOPPING
APPLICATOR APPARATUS AND METHODS
OF USE THEREOF**

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3,707,769 A	1/1973	Syrjanen et al.
4,248,173 A	2/1981	Kuhlman
4,313,535 A	2/1982	Carmichael
4,889,241 A	12/1989	Cogan et al.
4,936,248 A	6/1990	Miller
5,052,330 A	10/1991	Stacy
5,150,798 A	9/1992	Mills, Jr.
5,238,303 A	8/1993	Dixon
5,238,493 A	8/1993	Miller

(Continued)

OTHER PUBLICATIONS

Robins Vibro Batter and Breeding Machine, Robins Food Processing
Machinery, A.K. Robins and Company, Incorporated, p. 230.

(Continued)

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Related U.S. Application Data

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

580,644 A	4/1897	Ham
2,659,338 A	11/1953	Harrison
3,245,518 A	4/1966	Reibel et al.

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(57) **ABSTRACT**

Apparatuses and methods for coating, topping, and convey-
ing foods. The apparatus includes a first frame, spring assem-
blies, a vibrating assembly including an upper pan, a middle
pan, a lower pan, and a second frame mounted to the lower
pan with the spring assemblies. The second frame is an
excited frame and the upper pan, the middle pan, the lower
pan are vibrationally connected. The apparatus also includes
a vibratory drive unit mounted and adapted to impart energy
to the second frame. In addition, the apparatus has a wire
conveyor belt assembly including a wire conveyor belt, and a
housing that receives the wire conveyor belt. The wire con-
veyor belt assembly is suspended inside of the vibratory
assembly by the first frame such that the wire conveyor belt
assembly is isolated from the vibratory assembly.

5 Claims, 15 Drawing Sheets

